

obtaining network flow data independent from said accounting start-stop event data from a router within a network through an intermediary netflow collector, said network flow data including data regarding the number and type of packets utilized by a user; and

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me correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

REMARKS

Claims 1, 13-18, and 22-24 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. The text of claims 2-12, 19-21, and 26-35 is unchanged, but their meaning is changed because they depend from amended claims.

Claims 1, 13-18, and 22-24 have been amended to clarify that the network flow data is independent of the accounting start-stop event data. Support for this may be found in the Specification, on page 12, line 1 ("A second source of accounting-related data is generated throughout the PSN").

Claim 18 has been amended to clarify that the integrating accounting adapter does the correlation. Support for this may be found in the Specification, on page 15, lines 5-7.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned “Version with Markings to Show Changes Made”.

The 35 U.S.C. § 112 Rejection

Claims 18-21, 26, 27, 29, 30, 32 and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention. This objection is respectfully traversed.

With regard to claim 18, it has been amended to clarify that the integrating accounting adapter does the correlating. With regard to claims 19-21, 26, 27, 29, 30, and 32, these claims have been cancelled.

Withdrawal of the 35 U.S.C. § 112, second paragraph, rejection is respectfully requested.

The 35 U.S.C. § 102 Rejection

Claims 1, 3, 5, 6, 9, 15, 18 and 23 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Koperda.¹ This rejection is respectfully traversed.

¹ U.S. Patent No. 6,230,203

Contrary to what was stated in the Office Action, Koperda does not teach "obtaining accounting start-stop event data from an accounting server", "obtaining network flow data from a router within a network through an intermediary netflow collector, said network flow data including data regarding the number and type of packets utilized by a user", or "correlating accounting start-stop event data and network flow data into a subscriber specific call detail record unique to the user by matching accounting start-stop event data associated with the user with network flow data associated with the user".

The present invention provides a solution to the problem that "no integrated accounting mechanism exists to resolve information originating from multiple sources throughout the PSN structure" (Specification, page 4, line 22 through page 5, line 1). Network flow data is collected on routers. Separate accounting start-stop data is collected by an accounting server via the AAA server (See Specification, page 2, line 12 through page 3, line 12 for information on how the start-stop events are recorded). The present invention aggregates this information from multiple sources and stores it in an accounting record for each user. One major advantage of the present invention is that it can utilize data collected via existing technology, thus not necessitating a dramatic restructuring of router or network architecture. Claims 1, 13-18, and 22-24 have been amended to make this fact more clear.

The invention in Koperda, however, does not disclose any such aggregation of data from multiple sources. Additionally, it does require a dramatic restructuring of the router technology as a novel hub must be introduced including a link access circuit which tracks ALL information pertaining to a user's connection. While it is not spelled out in the specification of Koperda, it is likely that aggregation of information from multiple sources was not necessary because the invention in Koperda is directed to cable modem technology, where users are constantly "logged on". Hence, the idea of discrete start-stop events similar to what are required when dealing with dial-up accounts is one that apparently is not necessary. Without the capability to receive dial-up access, there is no reason for having accounting start-stop data for the connection, as the user is "always on". Even though Koperda refers to connection times, what it is actually referring to is the time the user is actually spending interacting with the network (requesting or receiving packets), which would probably be more accurately described as "session time" as technically the connection is always on provided a physical link exists between the hub and the cable modem and all equipment is functioning normally.

Thus, the link access circuit actually is specially designed to collect ALL necessary data regarding the user. Therefore, when this information is transmitted to the central administrative computer, there is no need to aggregate it with information from a different source.

According to the M.P.E.P., a claim is anticipated under 35 U.S.C. § 102(a), (b) and (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.²

The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

Since Koperda does not teach one or more of the steps in each of the claims of the present invention, withdrawal of the 35 U.S.C. § 102 rejection is respectfully requested.

The 35 U.S.C. § 103 Rejection

Claims 2, 4, 7, 8, 10-13, 16 and 19-21 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Koperda in view of Official notice taken by the Examiner, among which claims TBD are independent claims. This rejection is respectfully traversed.

According to the Manual of Patent Examining Procedure (M.P.E.P.),

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable

² Manual of Patent Examining Procedure (MPEP) § 2131. See also *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

expectation of success must both be found in the prior art, not in the applicant's disclosure.³

This rejection is traversed for the same reasons as was argued in the 35 U.S.C. § 102 section above.

The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.


³ M.P.E.P. §2143

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,

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Version With Markings to Show Changes Made

Please amend claims 1, 13-18, and 22-24 as follows.

1. (Amended Three Times) A method for accounting for network usage

comprising:

obtaining accounting start-stop event data from an accounting server;

obtaining network flow data independent from said accounting start-stop event data from a router within a network through an intermediary netflow collector, said network flow data including data regarding the number and type of packets utilized by a user; and

correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

13. (Amended Three Times) A method for accounting for network usage

comprising:

parsing accounting start-stop event data from an accounting server on a prescribed time interval;

publishing said accounting start-stop event data on an information bus;

collecting network flow data independent from said accounting start-stop event data from a network router and forwarding said network flow data to a network flow

collector, said network flow data including data regarding the number and type of packets utilized by a user;

aggregating said network flow data according to a prescribed aggregation scheme;

parsing said network flow data from said network flow collector;

publishing said network flow data on an information bus;

collecting said accounting start-stop event data and said network flow data at a target device that subscribes to said accounting start-stop event data and said network flow data; and

correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

14. (Amended Three Times) A method for aggregating accounting start-stop event data and network flow data within a computer network comprising:

obtaining accounting start-stop event data from an accounting server;

obtaining network flow data independent from said accounting start-stop event data from a router within a network through intermediary netflow collectors, said network flow data including data regarding the number and type of packets utilized by a user; and

correlating said accounting start-stop event and said network flow data into a call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

15 (Amended Three Times) An apparatus for accounting for network usage comprising:

a means for obtaining accounting start-stop event data from an accounting server;

a means for obtaining network flow data independent from said accounting start-stop event data from a router within a network through an intermediary netflow collector, said network flow data including data regarding the number and type of packets utilized by a user; and

a means for correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

16. (Amended Three Times) An apparatus for accounting for network usage comprising:

means for parsing accounting start-stop event data from an accounting server on a prescribed time interval;

means for publishing said accounting start-stop event data on an information bus;

means for collecting network flow data independent from said accounting start-stop event data from a network router and forwarding said network flow data to a network flow collector, said network flow data including data regarding the number and type of packets utilized by a user;

means for aggregating said network flow data according to a prescribed aggregation scheme;

means for parsing said network flow data from said network flow collector;

means for publishing said network flow data on an information bus;

means for collecting said accounting start-stop event data and said network flow data at a target device that subscribes to said accounting start-stop event data and said network flow data; and

means for correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

17. (Amended Three Times) An apparatus for aggregating accounting start-stop event data and network flow data within a computer network comprising:

a means for obtaining accounting start-stop event data from an accounting server;

a means for obtaining network flow data independent from said accounting start-stop event data from a router within a network through intermediary netflow collectors, said network flow data including data regarding the number and type of packets utilized by a user; and

a means for correlating said accounting start-stop event and said network flow data into a call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

18. (Amended Three Times) An apparatus for accounting for network usage comprising:

an accounting adapter in communication with accounting start-stop event data;

a network flow adapter in communication with network flow data independent from said accounting start-stop event data, said network flow data including data regarding the number and type of packets utilized by a user; and

an integrating accounting adapter in communication with said accounting adapter and said network flow adapter, wherein said integrating accounting adapter [which] correlates said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

22. (Amended Three Times) An apparatus for aggregating accounting start-stop event data and network flow data within a computer network comprising:

an accounting adapter in communication with accounting start-stop event data;

a network flow adapter in communication with network flow data independent from said accounting start-stop event data, said network flow data including data regarding the number and type of packets utilized by a user; and

an integrating accounting adapter in communication with said accounting adapter and said network flow adapter which correlates said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by

matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

23. (Amended Three Times) A program storage device readable by a machine tangibly embodying a program of instructions executable by the machine to perform a method for accounting for network usage, said method comprising:

obtaining accounting start-stop event data from an accounting server;

obtaining network flow data independent from said accounting start-stop event data from a router within a network through an intermediary netflow collector, said network flow data including data regarding the number and type of packets utilized by a user; and

correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.

24. (Amended Three Times) A program storage device readable by a machine tangibly embodying a program of instructions executable by the machine to perform a method for aggregating accounting start-stop event data and network flow data in a computer network, said method comprising:

obtaining accounting start-stop event data from an accounting server;

obtaining network flow data independent from said accounting start-stop event data from a router within a network through an intermediary netflow collector, said network flow data including data regarding the number and type of packets utilized by a user; and

correlating said accounting start-stop event data and said network flow data into a subscriber specific call detail record unique to said user by matching said accounting start-stop event data associated with said user with said network flow data associated with said user.